

CLAIMS

What is claimed is:

1. A data storage medium, comprising:
AV data;
a markup document which is provided to reproduce the AV data in an interactive mode;
and
control information which is provided to identify buffering state information of the markup document to be preloaded.
2. The data storage medium of claim 1, wherein the control information includes an application program interface (API) that generates a report signal used to identify a buffering state of the markup document.
3. The data storage medium of claim 1, wherein the control information includes an [obj].isCached(URL, resType) API that generates a report signal, where the URL is a parameter indicating a file path of the markup document and the resType is a parameter indicating an attribute of the markup document.
4. The data storage medium of claim 1, wherein the control information includes an API that returns a value of 0 in response to preloading of the markup document being successful, a value of 1 in response to the preloading of the markup document being failed, and a value of 2 in response to the preloading of the markup document still being conducted.
5. The data storage medium of claim 1, wherein the control information includes an API that generates a fetch signal used to issue a command to preload the markup document.
6. The data storage medium of claim 5, wherein the API returns a response indicating whether the command to preload the markup document has been successfully transmitted using the fetch signal.
7. The data storage medium of claim 1, wherein the control information includes an API that is used to determine whether preloading of the markup document is completed.